F1-024

I. Executive Summary

a. Applicant Name

Whiskeytown National Recreation Area
National Park Service
Whiskeytown-Shasta-Trinity National Recreation Area

b. Project Description and Primary Objectives

This project will identify and inventory existing and potential sources of eroded sediment within Whiskeytown National Recreation Area (WHIS) which comprises a significant and highly erodible portion of the Clear Creek watershed. Primary objectives are to identify erosion sites, assess the feasibility and cost-effectiveness of treatments to reduce erosion and subsequent sedimentation, and prioritize projects for restoration implementation. This inventory project will lead to restoration treatments that decrease erosion and sedimentation to creeks, improve water quality, encourage the return of natural ecosystems to pre-disturbance conditions, contribute to the effort to restore and protect salmonid habitat in Clear Creek, reduce the buildup of sedimentation behind Saeltzer and Whiskeytown Dams, and increase awareness of the importance of watershed health.

c. Approach/Tasks/Schedule

Inventory work will use trained people to document all sites in WHIS that have the potential to deliver sediment. Work will be similar to work completed in Redwood National Park for the past 15 years and will follow procedures as recommended in the Redwood Watershed Restoration Manual. Sub-watersheds will be identified, and road networks and drainage systems of each sub-watershed recorded on the appropriate topographic map and drawn on clear mylar to overlay orthophotos. Every site where a road crosses a drainage channel will be marked. Maps and air photos will be taken to the field and used to identify current and potential erosion sites. A database will developed and linked with Global Positioning System technology to document site locations which can then be accurately mapped in Geographic Information Systems. The project will take approximately two years to complete.

d. Justification For Project and Funding By CALFED

The chief stressor that project addresses is Channel Aggradation Due To Fine Sediments. Clear Creek historically supported substantial runs of steelhead and salmon, species whose status under state and federal law constrains water management in the Delta. Clear Creek has the potential to again support these declining species and is one of the prime streams for such purposes. This project meets the CALFED mission to restore ecological health and improve water management for beneficial uses of the-Bay-Delta System because Clear Creek is a tributary of the Sacramento River and has the potential to support six percent of the Sacramento River salmonid population. This inventory project proposal meets the CALFED mission to restore ecological health and improve water management for beneficial uses of the Bay-Delta system. The project has great potential to provide north valley habitat for migratory birds, a secondary CALFED priority.

The Lower Clear Creek Watershed Analysis completed in 1996 reports that sediments impacting lower Clear Creek are caused by upland erosion and a significant portion of that erosion is occurring within the boundaries of WHIS. Accelerated erosion and sedimentation is one of the primary factors affecting the decline of salmon in Clear Creek.

e. Budget Costs and Third Party Impacts

The project is expected to cost $624,760 over a period of two years, approximately $16 per acre, and third party impacts are all beneficial. Under the guidelines of the President's Northwest Forest Plan, the Clear Creek drainage has been selected as a pilot demonstration watershed because it contains a blend of fisheries, hydroelectric power, forestry issues and distinct upstream/downstream interests characteristic of the major streams such as the Sacramento and Feather Rivers, which feed the Bay-Delta ecosystem. Information gathered and technical experience gained as a result of this proposal will be shared with all cooperators and will aid in setting priorities and quantification of project work on a watershed-wide basis in the Clear Creek drainage and focus attention on an issue where consensus will be relatively easy to reach. Experience acquired here may be transferred to the Shasta Trinity National Forest, a WHIS collaborator, to similar efforts in the upper-most regions of the Clear Creek system in the Pit and Sacramento River watersheds as their in-house funds allow.

f. Applicant Qualifications

The National Park Service staff at Whiskeytown has the benefit of resource management experience in WHIS since 1965 and access to the 15 years experience in watershed inventory and restoration completed at Redwood National Park. The techniques and methods developed at Redwood National Park are readily transferable to Whiskeytown, and Redwood staff geologists and geomorphologists are available for consultations and site visits.

WHIS has been a participant in multi-agency erosion inventory work completed in lower Clear Creek. WHIS has also gained practical hands-on experience in restoration inventory and assessment over the past 18 months by working on a 300 acre pilot demonstration sub-watershed project within the park cooperatively with Shasta College.

g. Monitoring and Data Evaluation

Monitoring of inventory work and data evaluation will be conducted during weekly meetings and bi-monthly on-site review visits by technical experts from Redwood National Park, Shasta College, and others.

h. Local Support/Coordination With Other Programs/Compatibility with CALFED Objectives

WHIS encourages the participation of local special interest groups, the Clear Creek Coordinated Resource Management Plan Group, and the public in all planning efforts. Through public meetings, meetings with other agencies, and special interest groups WHIS is a cooperative partner in many ongoing and planned restoration efforts in the Clear Creek watershed.

II. Title Page

a. Title of Project

Whiskeytown Watershed Restoration Inventory

b. Applicant Name

National Park Service, Whiskeytown National Recreation Area
Whiskeytown-Shasta-Trinity-National Recreation Area
Principal Investigators: Project management by David A. Pugh, Superintendent, Bud Ivey, Chief of Natural Resource Management, and Gretchen Ring, Vegetation Specialist.
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c. Type of Organization and Tax Status

National Park Service is a tax-exempt federal agency of the Department of the Interior.

d. Tax Identification Number

84-1024566

e. Technical and Financial Contact Persons

Same as above

f. Participants/Collaborators in Implementation

Northwest Sacramento Provincial Advisory Committee and Provincial Interagency Executive Committee, USBR, BLM, NRCS, Shasta Trinity National Forest, Shasta College, Shasta Tehama Bioregional Council, Clear Creek Coordinated Resource Management Planning Group.

g. RFP Project Group Type

Group 3: Services; All Other Projects

III. Project Description

a. Project Design and Approach

This watershed inventory work will locate, identify, and map old roads, skidroads, landings, and other human caused impacts in all sub-watersheds within WHIS. Results of the inventory will be used to analyze and prioritize sub-watersheds for restoration treatments. Road related problems in each sub-watershed will be quantified with regard to relative volumes of sediment currently being generated or potentially generated at each site. WHIS contains an estimated 500 miles of old roads in a landscape of steep terrain and highly erodible soils. Data gathered during this project will allow evaluation of the magnitude of the problem, and a quantifiable means by which treatment priorities will be established.

Steps

1. Conduct a thorough study of all available air photos to obtain an overview of watershed conditions and disturbances, and identify sub-watersheds and all road-stream and road-headwater intersections. Airphoto study will delineate actual and potential problem areas which need to be field checked. Smaller skidroads may be overgrown and may not show up on air photos and these will need to be mapped as they are encountered in the field. Air photo analysis is an efficient way to become thoroughly familiar with the drainage network, history of road construction, mining, timber harvesting, and dates of other disturbances.

Old and more recent air photos will be used, as erosion problems which are sometimes hidden by dense regrowth on recent airphotos will often show clearly on photos taken soon after the disturbance. Specific erosion features will be documented, using designations for that feature in each successive year, and written notes will be keyed to these labels. The year that new erosion becomes visible will be noted, as well as dates of road building, road failures, timber harvest or other disturbance. The following features will be noted and mapped:

- All locations where roads or skid trials cross drainages, noting evidence of diversion or washout, if the crossing was ever repaired, and the date of repair.
- Gullies and landslides with causes identified if possible.
- Wet areas and springs will be identified as well as the water flow if diverted down roads.

2. All existing and potential erosion problems along roads will be documented including the relative amount of erosion at each site. Data will be collected on inventory forms developed and used for the demonstration sub-watershed project mentioned above. All sites will be located using Geographic Positioning Systems technology to provide accurate location information and allow sites to be mapped and analyzed in Geographic Information Systems (GIS). A data base will be developed and linked to GIS which can be queried for management and planning needs and concerns. A sample inventory form is included at the end of this section.

Major considerations taken into account and noted during inventory are listed below.

- Is the site actively eroding, dormant, inactive or is there potential for erosion?
- What is the cause of the problem?
- Is the problem likely to be reactivated, considering what will happen in a normal rainy season or a major storm?
- How much sediment is likely to be released? Volume calculation estimating guidelines are included on the inventory form.
- What is the significance of this occurrence and its impact relative to other problems in the sub-watershed and the NRA as a whole?
- What are possible treatment alternatives, considering the cause as well as the active erosion which is a symptom of the problem. Treatment alternatives are outlined on the inventory form.
- Add comments and a sketch of the site, if applicable.

3. Data will be compiled and analyzed so that sub-watersheds and specific sites can be prioritized for treatment using benefit/cost analysis.

4. Adaptive management techniques will be used throughout the project period. Adaptive management is a management style which is flexible enough that changes in the program can be implemented based on findings and results which surface during the course of the project. Goals and priorities will be reviewed at the conclusion of the inventory process, and may be modified as a result of information gathered during the inventory process. Watershed conditions during or after major storms will be spot-checked which may also result in changes in priorities and planning.

5. Geomorphic field mapping will follow the inventory process and is a much more detailed study of each site identified on inventory forms. The essential goals of geomorphic field mapping are listed below.

- Document the scale of erosion activity and possible links to other problems.
- Search the area for similar problems and potential problems which can be prevented.
- Discover and document the causes of problems and determine that potential problems have not been overlooked.
- Document the scale of the problem and define needed restoration tasks such as environmental compliance, time frames, and funding sources.

Appropriate air photos which most clearly show the extent of the problem will be made into black and white enlargements and photomylars. The enlargements will be cut up and used on field map boards made of plywood with photomylars used for final, reproducible maps. Results of the air photo study including roads, drainages, and major features, are transferred to mylar overlays on top of the black and white enlargements.

Roads will be mapped first, followed by hillslope details and topography. Previously filled out inventory forms will be taken into the field for use in the mapping process. Displaced water will be followed upslope to determine cause, and followed downslope to determine impacts. Soil and vegetation types, particularly moisture indicators, will be noted.

b. Location and/or Geographic Boundaries of the Project

WHIS is managed by the National Park Service and is located eight miles west of Redding, Shasta County, California. The Area of the NRA is 42,503 acres, which includes the 3,220 acre Whiskeytown Lake, a key feature of the water storage system that maintains water quality in the Delta, created by the construction of Whiskeytown Dam on Clear Creek by the Bureau of Reclamation in 1962. Whiskeytown Dam also serves as a forebay for the Spring Creek Power Plant, and is capable of diluting water going into Clear Creek and the Sacramento River in the event of a significant spill from Iron Mountain Mine, playing a key role in water quality assurance programs for the Sacramento River.

WHIS lies almost entirely in the Clear Creek watershed and Clear Creek is a tributary to the Sacramento River. The NRA lies on four topographic quadrangles: Whiskeytown, Igo, French Gulch and Shasta Bally. A map of Whiskeytown National Recreation Area is located at the end of this section.

c. Expected Benefits

The chief stressor related to this project is Channel Aggradation Due to Fine Sediments. Accelerated erosion throughout the NRA has increased the deposition of fine sediments in stream channels and Whiskeytown Lake. No fish are able to move upstream of Whiskeytown Dam, but sediment deposition in lower Clear Creek south of the Dam has decreased the suitability of spawning gravels. This project will result in a plan to restore high priority sites and decrease fine sediment input.

This project will document specific sources of risk to a high priority chinook salmon and steelhead stream, including at least one and potentially three or four races of chinook, and allow restoration to take place in a managed, prioritized way. It will also provide a strong first step toward development of programs to integrate the management of watersheds above and below major dams. It will provide a pilot scale opportunity for addressing conflicts between forestry, fish, power and water users. High risk species are chinook salmon and ecosystem benefits include habitats which provide broad benefits to priority species and the ecosystem.

CALFED priority habitats are seasonal wetland and aquatic habitat, instream aquatic habitat, and shaded riverine aquatic habitat. CALFED priority species include winter-run, spring-run, and late-fall run chinook salmon. With multi-agency planned increased water flows, placement of suitable gravel and boulders in Clear Creek, modification or reconstruction of Saeltzer Dam on Clear Creek south of the Whiskeytown Unit, and decreased sediment

deposition, it is expected that spring-run chinook salmon will be restored up to Whiskeytown Dam and winter-run and late fall run salmon will be restored at least up to Saeltzer Dam. The proposed project will support this on-going in-stream program and protect it from catastrophic sedimentation episodes.

Specific expected primary benefits include the partial restoration of ecosystem health, the identification of areas in need of restoration treatments, the decrease of erosion and sediment to creeks and Whiskeytown Lake, and a contribution to the effort to restore salmonid fisheries in Clear Creek.

CALFED non-ecosystem benefits include economic, education and partnership benefits. Restoration inventory work will provide much-needed employment opportunities for displaced timber workers. Resource enhancement and protection generate economic benefits as shown in both National Park Service and California Department of Water Resources studies. These studies indicate that real estate property values increase near greenways, trails, and open spaces, particularly where there are water-based recreation opportunities as there are in WHIS. The increased property values result in increased revenue for local governments in property taxes. WHIS is a significant contributor to the recreation and tourism industry in Shasta County. There is a potential to promote activities in conjunction with watershed restoration work, such as boating, fishing, and birdwatching. These activities contribute significantly to the local economy, and the enhancement of resources attracts increased tourism.

Education opportunities include the involvement of the Whiskeytown Environmental School, Adopt-A-Watershed, Shasta College students under a Cooperative Agreement already in place, and potential partnership opportunities with groups such as Native Americans, the California Native Plant Society and Horsetown-Clear Creek Preserve.

This project will further inter-agency and stakeholder cooperative efforts in Clear Creek restoration. WHIS is actively involved with the Clear Creek Coordinated Resource Management Plan (CRMP). Participants in the CRMP in addition to National Park Service, Whiskeytown, include Bureau of Reclamation, Bureau of Land Management, Western Shasta Resource Conservation District, Natural Resources Conservation Service, California Department of Fish and Game, US Fish and Wildlife Service, California Department of Forestry, Horsetown-Clear Creek Preserve, private landowners, business owners, and special interest groups such as The California Native Plant Society.

This project will benefit other ecosystem restoration programs by virtue of the experience gained and techniques used which will be readily transferable to other restoration efforts.

d. Background and Biological/Technical Justification

This project is needed in order to prioritize and continue watershed restoration work in an area with numerous old roads which are believed to contribute significant sedimentation to creeks and Whiskeytown Lake. Watershed restoration work based on this inventory will contribute to

the restoration of Sacramento River salmonid populations. The proposed methodology is based on work completed in Redwood National Park for the past 15 years and similar to restoration work recently completed in Grass Valley Creek watershed immediately west of the Clear Creek watershed.

Expected Benefits: This project will result in detailed prioritized data which will be used for durable restoration projects. Methods implemented in the past which were found to be ineffective include check dams, inboard ditches, and revegetation of disturbed areas. Restoration work implemented as a result of this project will consider potential and current erosion and restored geomorphology of slopes and drainages resulting in hydrologically stable landscapes. Landscapes restored to pre-disturbance configurations will achieve stability by allowing runoff to follow natural drainages.

Current status of project: Some inventory work has been completed in lower Clear Creek sub-watersheds in cooperation with other agencies and inventory work has been completed in the demonstration sub-watershed by WHIS and Shasta College under a Cooperative Agreement. These findings will be integrated into the CALFED funded inventory project.

e. Proposed Scope of Work

Phase 1- Scoping (2 months).
Hire, orient, train personnel. Meet with all potential participants/supporters and interested public to discuss project goals, objectives, and methods. Use input to develop draft Implementation Plan, and input from participants to finalize plan. The plan will address feasibility and design of project.

Phase 2- Identify Sub-watersheds; Delineate Roads and Drainages (6 months).
Study historic air photos; define and map subwatersheds and map roads and drainages. Define and map specific erosion features.

Phase 3-Field Verification/Data Entry/GIS (12 months)
Field work in each sub-watershed; all roads defined in the prior phases will be inventoried and inventory forms completed for each erosion or potential erosion site. Location sites will be documented with GPS and photographed and video recorded. Subwatersheds and sites will be entered in a database linked to GIS.

Phase 4-Evaluation/Prioritization/Monitoring (4 months).
Results of data collection will be evaluated and sub-watersheds prioritized for treatment. Questionable sites will be field checked again, and monitoring of sites will be conducted as needed to assist with prioritizing. During this phase, another meeting will be held for all stakeholders to discuss findings and priorities. Re-ordering of goals, objectives, and amendments to the Implementation Plan will be made at this time based on the results of data

evaluation and public/inter-agency meetings. Funding requests will be explored and developed to implement restoration treatments.

Four technical and financial project reports in support of project performance will be prepared-one in conjunction with each phase outlined above. Reports will be due the last day of each phase. National Park Service, Whiskeytown will assume responsibility for the completion of timely reports.

f. Monitoring and Data Evaluation

At least three public informational meetings will be held during the project period to address concerns. Weekly meetings will be held for project staff to coordinate monitoring and data evaluation which will be ongoing and constant throughout the project period. Consultations and peer review meetings and tours will be scheduled during each phase of the project. Data obtained in this project will be used via GIS to coordinate with other park projects and programs such as vegetation inventories, prescribed burns, maintenance projects, and cultural resource concerns. Data will be used to prioritize restoration projects and identify restoration needs which will be subject to environmental compliance.

g. Implementibility

National Park Service protocols and policies will be followed including *NPS-75, Natural Resources Inventory and Monitoring Guideline*, and *NPS-77, Natural Resources Management Guideline*. Inventory work is a Department of the Interior Categorical Exclusion under the NEPA process pursuant to 516 DM2 App.1.6, *Non-destructive data collection, inventory, study, research and monitoring activities*. Therefore, an environmental assessment will not be written. Permits from regulatory agencies are not needed for inventory work. Environmental Assessments will be prepared prior to the beginning of restoration treatments. Project work will be coordinated with other WHIS projects and other inter-agency cooperative work in Clear Creek. Coordination will be achieved with the appointment of a Project Coordinator. The project will lead to the restoration of ecological processes in upper watersheds which will improve water quality for all downstream users.

Watershed restoration inventory work will be under the direction of a hydrologist to ensure that hydrologic and climatic concerns are addressed. Winter storms with intense rainfall are common and will be taken into account. Local support and outreach will be encouraged by holding meetings and inviting comments. Adaptive management techniques will be used as needed to account for land use changes and conditions as well as whatever concerns surface during the course of the project. Potentially hazardous conditions in project field work include steep slopes and open mine tunnels. Precautions for these and other safety issues will be discussed in weekly meetings, as well as the need to notify the NPS Cultural Resources staff if any artifacts or historical sites are encountered in the course of project surveys.

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ROAD EROSION INVENTORY FORM

1. Site or Seg #:_____ 2. Date Mapped _____ 3. Sheet #:_____

4. Watershed Name:_____ 5. Mapped by: _____

6. Feature type: [ ] Stream Crossing [ ] Swale Crossing [ ] Road Segment [ ] X-Road Drain [ ] Spring [ ] Other

7. Map Sheet_____ 8. air photos Used:_____ 9. Dates of photos_____

10. Photo's Taken [ ]Y [ ]N Photo #_____ Roll #_____

[ ] check if information is the same as previous sheet #

Access Information

11. Road Name:_____

12. Road type: [ ]Service road [ ] Haul road [ ] Skid road [ ] Fire trail [ ] Transmission line access

13. Current Road Condition: [ ]Driveable [ ] Maintained [ ] Walk only

14. Is the road accessible to equipment? [ ]Y [ ]N Comments_____

15. Desired Condition: [ ] 2WD [ ] 4WD [ ] Bike [ ] Walking trail only [ ] Recontour

16. History/Comment: (year of construction, year last used, current use, when last maintained etc.) :_____

_____

Road Segment

17. Segment #_____ 18. Potential Treatment: [ ] Outslope [ ] OS w/rolling dip [ ] Recontour

19. Type of road: [ ] Service road [ ] Haul road [ ] Skid road [ ] Fire trail [ ] Transmission line access

20. Length:_____ Width:_____

21. Approx. outslope: [ ] Moderate (2-5%) [ ] Partial (>5%) [ ] Full OS (natural contours)

22. (Wedge) x (L) = (_____) x (_____) = _____ ft^3/27 = _____CY

23. Potential for future erosion: [ ] low [ ]moderate [ ]high justification:_____

24. Comments:_____

_____

Swale/Stream Crossing

25. Site # _____ 26. Crossing: [ ] Stream crossing [ ] Headwater swale crossing

27. Type of Road: [ ] Service road [ ] Haul road [ ] Skid road [ ] Fire trail [ ] Transmission line access

28. Drainage Structure: [ ] CMP dia._____ [ ] Humboldt Xing/logs [ ] No structure obvious (fill only)

30. Culvert Condition_____ 31. Diversion Potential: [ ] high [ ] mod [ ] low

32. Fill Amount: [ ] sm (1-5 CY) [ ] med. (5-20 CY) [ ] lg. (20-50 CY) [ ] x-lg. (50CY +)

33. Drainage Area:_____acres

34. Potential for future erosion: [ ] low [ ] moderate [ ] high justification:_____

35. Recommended Treatment (% road fill removal): [ ] shallow dip (10%) [ ] culvert (30 %) [ ] dip (50%) [ ] removal (100%)

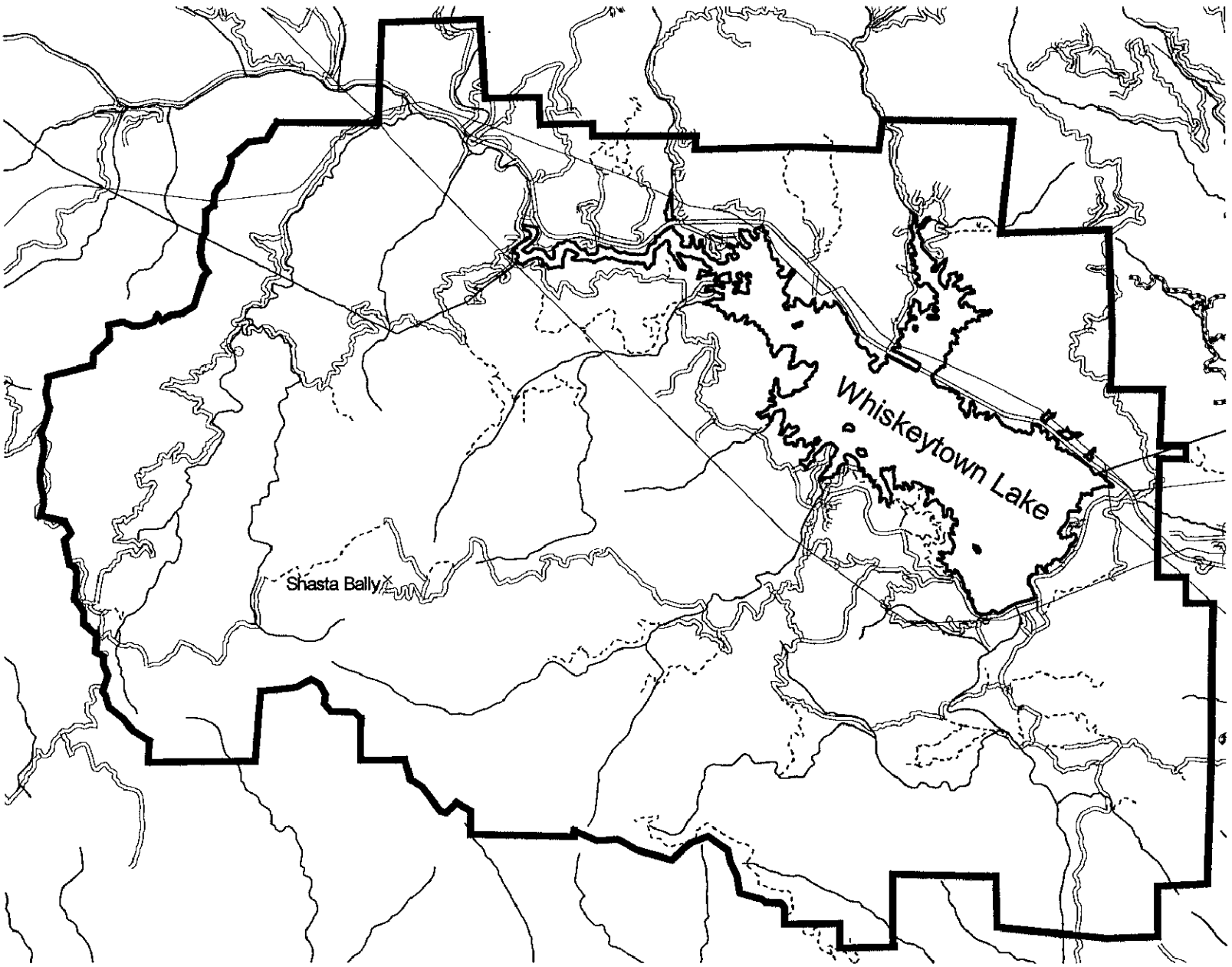
36. Comments:_____

_____

Other

37. Site #_____ 38. Description:_____

Whiskeytown Unit
Whiskeytown-Shasta-Trinity
National Recreation Area



high voltage lines
roads
Whiskeytown Lake
streams
jeep roads and trails
boundary

2 0 2 4 Miles

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V. Costs and Schedule to Implement Proposed Project

a. Budget Costs

The project will be divided into four distinct phases over a two year period. The potential exists for incremental CALFED funding by phases. Phases are described in IV-b on page 11. Salaries and benefits are described below, and in TABLE 1. TABLE 2 shows cost breakdown by project phase. Costs are based on the use of NPS employees. However, depending on the availability of expertise, some or all work may be accomplished via contractor.

Salaries and Benefits $ 560,560.00

Staff A Project Director Hydrologist or Geomorphologist	$78,000 yr x 2 years=$156,000.00
Staff B Project Coordinator	$39,000 yr x 2 years=$ 78,000.00
Staff C GIS Specialist	$52,000 yr x 1 year =$ 52,000.00
Staff D Inventory Staff 6 workers@$2080.00/mo/ea	$149,760 yr x 22 mos=$274,560.00
	$560,560.00

TABLE 1 Salaries and Benefits Breakdown by Project Phase

Staff Type	Phase 1 (2 months)	Phase 2 (6 months)	Phase 3 (12 months)	Phase 4 (4 months)	Total Cost
Staff A	$13,000	$ 39,000	$ 78,000	$26,000	$156,000
Staff B	$ 6,500	$ 19,500	$ 39,000	$13,000	$ 78,000
Staff C	$ 0	$ 0	$ 52,000	$ 0	$ 52,000
Staff D	$ 0	$ 74,880	$149,760	$49,920	$274,560
TOTAL	$19,500	$133,380	$318,760	$88,920	$560,560

TABLE 2 Cost Breakdown

Project Phase/ Task	Direct Labor Hours	Direct Salary/ Benefits	Indirect Overhead	Materials	Total Cost Each Phase
Phase 1 (2 mos)	693	$ 44,460	$4,600	$9,000	$ 58,060
Phase 2 (6 mos)	8,320	$133,380	$13,800		$147,180
Phase 3 (12 mos)	18,720	$318,760	$27,600		$346,360
Phase 4 (4 mos)	5,547	$ 63,960	$9,200		$ 73,160
Total	33,280	$560,560	$55,200	$9,000	$624,760

Indirect overhead costs are estimated to be $2,300 per month and include the cost of copying, film, transportation, and miscellaneous supplies. Materials cover the cost of three Trimble GPS Units, one for each team, at $3000 each, for a total of $9000. These GPS Units are needed to provide the required degree of accuracy for site mapping.

Cost Summary

Salaries and benefits	$560,560
Overhead	$ 55,200
GPS Units	$ 9,000
TOTAL COST	**$624,760**

b. Schedule Milestones

Phase 1 Scoping
(2 months, January, February 1998)

Organize; define roles, responsibilities, procedures, hire and train personnel.
Conduct meetings, tours, develop draft Implementation Plan.
Draft Implementation Plan in place by March 1, 1998.
Phase 1 financial and technical reports complete by February 28,1998.

Phase 2 Identify sub-watersheds; delineate roads and drainages
(6 months, March 1998 through August 1998)

Map sub-watersheds, roads, drainages.
Sub-watersheds, roads, drainages defined and mapped by June 1, 1998.
Erosion features defined and mapped by September 1, 1998.
Phase 2 financial and technical reports complete by August 31, 1998.

Phase 3 Field verification; data entry; GIS
(12 months, September, 1998 through August 1999)

Complete inventory.
Field verification and site inventories complete by June 1, 1999.
Inventory database/GIS links complete by August 31, 1999.
Phase 3 financial and technical reports complete by August 31, 1999.

Phase 4 Evaluation; prioritization; monitoring
(4 months, September, 1999 through December 31, 1999)

Evaluate, prioritize, seek funding.
Initial evaluation and prioritizing completed by October 31, 1999.

Re-order, goals, objectives, Implementation Plan.
Finalize evaluation and prioritizing.
Explore and develop restoration funding sources.
Phase 4 financial and technical reports complete by November 30, 1999.
Final Project Report complete by December 31, 1999.

c. Third Party Impacts

This project will benefit all stakeholders in the Clear Creek Watershed and improve water quality and fish habitat downstream. Project work and data analysis will be available and transferable to others for similar projects. Data collected may be useful to the planned upper Clear Creek Watershed Analysis. The project will improve and increase WHIS cooperative efforts with other agencies, Shasta College, and special interest groups

V. Applicant Qualifications

WHIS may hire the needed expertise as National Park Service employees and manage the project or contract the project work if an acceptable contractor is available. WHIS has technical expertise available from the NPS Water Resources Division, the Geologic Resources Division, and Redwood National Park.

VI. Compliance With Standard Terms and Conditions

The standard Terms and Conditions as specified in Attachment D are agreeable to Whiskeytown within the limits of federal government regulations.